

CEN 249 CIPNPGEN 095.ST25.txt  
SEQUENCE LISTING

<110> Centocor, Inc.  
Giles-Komar, Jill  
Tripathi, Mohit  
Snyder, Linda  
Nakada, Marian

<120> ANTI-DUAL INTEGRIN ANTIBODIES, COMPOSITINS, METHODS AND USES

<130> CEN 249 CIPNP

<140> US 09/920,267

<141> 2001-08-01

<150> 60/223,363

<151> 2000-08-07

<160> 17

<170> PatentIn version 3.1

<210> 1

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<212> PRT

<213> Homo sapiens

<400> 1

Arg Tyr Thr Met His  
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<210> 2

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<400> 2

Val Ile Ser Phe Asp Gly Ser Asn Lys Tyr Tyr Val Asp Ser Val Lys  
1 5 10 15

Gly

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Glu Ala Arg Gly Ser Tyr Ala Phe Asp Ile  
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Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala  
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Asp Ala Ser Asn Arg Ala Thr  
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Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln Pro Gly Arg  
1 5 10 15

Ser Arg Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Arg Tyr  
20 25 30

Thr Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
35 40 45

Ala Val Ile Ser Phe Asp Gly Ser Asn Lys Tyr Tyr Val Asp Ser Val  
50 55 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Glu Asn Thr Leu Tyr  
65 70 75 80

Leu Gln Val Asn Ile Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys  
85 90 95

Ala Arg Glu Ala Arg Gly Ser Tyr Ala Phe Asp Ile Trp Gly Gln Gly  
100 105 110

Thr Met Val Thr Val Ser Ser  
115

<210> 8  
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<400> 8

Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly  
1 5 10 15

Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr  
20 25 30

Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
35 40 45

Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly  
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro  
65 70 75 80

Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Pro  
85 90 95

Phe Thr Phe Gly Pro Gly Thr Lys Val Asp Ile Lys  
100 105

<210> 9  
<211> 1048  
<212> PRT  
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<400> 9

Met Ala Phe Pro Pro Arg Arg Arg Leu Arg Leu Gly Pro Arg Gly Leu  
1 5 10 15

Pro Leu Leu Leu Ser Gly Leu Leu Leu Pro Leu Cys Arg Ala Phe Asn  
20 25 30

Leu Asp Val Asp Ser Pro Ala Glu Tyr Ser Gly Pro Glu Gly Ser Tyr  
35 40 45

Phe Gly Phe Ala Val Asp Phe Phe Val Pro Ser Ala Ser Ser Arg Met  
50 55 60

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Phe Leu Leu Val Gly Ala Pro Lys Ala Asn Thr Thr Gln Pro Gly Ile  
 65 70 75 80  
 Val Glu Gly Gly Gln Val Leu Lys Cys Asp Trp Ser Ser Thr Arg Arg  
 85 90 95  
 Cys Gln Pro Ile Glu Phe Asp Ala Thr Gly Asn Arg Asp Tyr Ala Lys  
 100 105 110  
 Asp Asp Pro Leu Glu Phe Lys Ser His Gln Trp Phe Gly Ala Ser Val  
 115 120 125  
 Arg Ser Lys Gln Asp Lys Ile Leu Ala Cys Ala Pro Leu Tyr His Trp  
 130 135 140  
 Arg Thr Glu Met Lys Gln Glu Arg Glu Pro Val Gly Thr Cys Phe Leu  
 145 150 155 160  
 Gln Asp Gly Thr Lys Thr Val Glu Tyr Ala Pro Cys Arg Ser Gln Asp  
 165 170 175  
 Ile Asp Ala Asp Gly Gln Gly Phe Cys Gln Gly Gly Phe Ser Ile Asp  
 180 185 190  
 Phe Thr Lys Ala Asp Arg Val Leu Leu Gly Gly Pro Gly Ser Phe Tyr  
 195 200 205  
 Trp Gln Gly Gln Leu Ile Ser Asp Gln Val Ala Glu Ile Val Ser Lys  
 210 215 220  
 Tyr Asp Pro Asn Val Tyr Ser Ile Lys Tyr Asn Asn Gln Leu Ala Thr  
 225 230 235 240  
 Arg Thr Ala Gln Ala Ile Phe Asp Asp Ser Tyr Leu Gly Tyr Ser Val  
 245 250 255  
 Ala Val Gly Asp Phe Asn Gly Asp Gly Ile Asp Asp Phe Val Ser Gly  
 260 265 270  
 Val Pro Arg Ala Ala Arg Thr Leu Gly Met Val Tyr Ile Tyr Asp Gly  
 275 280 285  
 Lys Asn Met Ser Ser Leu Tyr Asn Phe Thr Gly Glu Gln Met Ala Ala  
 290 295 300  
 Tyr Phe Gly Phe Ser Val Ala Ala Thr Asp Ile Asn Gly Asp Asp Tyr  
 305 310 315 320

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Ala Asp Val Phe Ile Gly Ala Pro Leu Phe Met Asp Arg Gly Ser Asp  
325 330 335

Gly Lys Leu Gln Glu Val Gly Gln Val Ser Val Ser Leu Gln Arg Ala  
340 345 350

Ser Gly Asp Phe Gln Thr Thr Lys Leu Asn Gly Phe Glu Val Phe Ala  
355 360 365

Arg Phe Gly Ser Ala Ile Ala Pro Leu Gly Asp Leu Asp Gln Asp Gly  
370 375 380

Phe Asn Asp Ile Ala Ile Ala Ala Pro Tyr Gly Gly Glu Asp Lys Lys  
385 390 395 400

Gly Ile Val Tyr Ile Phe Asn Gly Arg Ser Thr Gly Leu Asn Ala Val  
405 410 415

Pro Ser Gln Ile Leu Glu Gly Gln Trp Ala Ala Arg Ser Met Pro Pro  
420 425 430

Ser Phe Gly Tyr Ser Met Lys Gly Ala Thr Asp Ile Asp Lys Asn Gly  
435 440 445

Tyr Pro Asp Leu Ile Val Gly Ala Phe Gly Val Asp Arg Ala Ile Leu  
450 455 460

Tyr Arg Ala Arg Pro Val Ile Thr Val Asn Ala Gly Leu Glu Val Tyr  
465 470 475 480

Pro Ser Ile Leu Asn Gln Asp Asn Lys Thr Cys Ser Leu Pro Gly Thr  
485 490 495

Ala Leu Lys Val Ser Cys Phe Asn Val Arg Phe Cys Leu Lys Ala Asp  
500 505 510

Gly Lys Gly Val Leu Pro Arg Lys Leu Asn Phe Gln Val Glu Leu Leu  
515 520 525

Leu Asp Lys Leu Lys Gln Lys Gly Ala Ile Arg Arg Ala Leu Phe Leu  
530 535 540

Tyr Ser Arg Ser Pro Ser His Ser Lys Asn Met Thr Ile Ser Arg Gly  
545 550 555 560

Gly Leu Met Gln Cys Glu Glu Leu Ile Ala Tyr Leu Arg Asp Glu Ser  
565 570 575

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Glu Phe Arg Asp Lys Leu Thr Pro Ile Thr Ile Phe Met Glu Tyr Arg  
 580 585 590  
 Leu Asp Tyr Arg Thr Ala Ala Asp Thr Thr Gly Leu Gln Pro Ile Leu  
 595 600 605  
 Asn Gln Phe Thr Pro Ala Asn Ile Ser Arg Gln Ala His Ile Leu Leu  
 610 615 620  
 Asp Cys Gly Glu Asp Asn Val Cys Lys Pro Lys Leu Glu Val Ser Val  
 625 630 635 640  
 Asp Ser Asp Gln Lys Lys Ile Tyr Ile Gly Asp Asp Asn Pro Leu Thr  
 645 650 655  
 Leu Ile Val Lys Ala Gln Asn Gln Gly Glu Gly Ala Tyr Glu Ala Glu  
 660 665 670  
 Leu Ile Val Ser Ile Pro Leu Gln Ala Asp Phe Ile Gly Val Val Arg  
 675 680 685  
 Asn Asn Glu Ala Leu Ala Arg Leu Ser Cys Ala Phe Lys Thr Glu Asn  
 690 695 700  
 Gln Thr Arg Gln Val Val Cys Asp Leu Gly Asn Pro Met Lys Ala Gly  
 705 710 715 720  
 Thr Gln Leu Leu Ala Gly Leu Arg Phe Ser Val His Gln Gln Ser Glu  
 725 730 735  
 Met Asp Thr Ser Val Lys Phe Asp Leu Gln Ile Gln Ser Ser Asn Leu  
 740 745 750  
 Phe Asp Lys Val Ser Pro Val Val Ser His Lys Val Asp Leu Ala Val  
 755 760 765  
 Leu Ala Ala Val Glu Ile Arg Gly Val Ser Ser Pro Asp His Ile Phe  
 770 775 780  
 Leu Pro Ile Pro Asn Trp Glu His Lys Glu Asn Pro Glu Thr Glu Glu  
 785 790 795 800  
 Asp Val Gly Pro Val Val Gln His Ile Tyr Glu Leu Arg Asn Asn Gly  
 805 810 815  
 Pro Ser Ser Phe Ser Lys Ala Met Leu His Leu Gln Trp Pro Tyr Lys  
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820

Tyr Asn Asn Asn Thr Leu Leu Tyr Ile Leu His Tyr Asp Ile Asp Gly  
835 840 845

Pro Met Asn Cys Thr Ser Asp Met Glu Ile Asn Pro Leu Arg Ile Lys  
850 855 860

Ile Ser Ser Leu Gln Thr Thr Glu Lys Asn Asp Thr Val Ala Gly Gln  
865 870 875 880

Gly Glu Arg Asp His Leu Ile Thr Lys Arg Asp Leu Ala Leu Ser Glu  
885 890 895

Gly Asp Ile His Thr Leu Gly Cys Gly Val Ala Gln Cys Leu Lys Ile  
900 905 910

Val Cys Gln Val Gly Arg Leu Asp Arg Gly Lys Ser Ala Ile Leu Tyr  
915 920 925

Val Lys Ser Leu Leu Trp Thr Glu Thr Phe Met Asn Lys Glu Asn Gln  
930 935 940

Asn His Ser Tyr Ser Leu Lys Ser Ser Ala Ser Phe Asn Val Ile Glu  
945 950 955 960

Phe Pro Tyr Lys Asn Leu Pro Ile Glu Asp Ile Thr Asn Ser Thr Leu  
965 970 975

Val Thr Thr Asn Val Thr Trp Gly Ile Gln Pro Ala Pro Met Pro Val  
980 985 990

Pro Val Trp Val Ile Ile Leu Ala Val Leu Ala Gly Leu Leu Leu Leu  
995 1000 1005

Ala Val Leu Val Phe Val Met Tyr Arg Met Gly Phe Phe Lys Arg  
1010 1015 1020

Val Arg Pro Pro Gln Glu Glu Gln Glu Arg Glu Gln Leu Gln Pro  
1025 1030 1035

His Glu Asn Gly Glu Gly Asn Ser Glu Thr  
1040 1045

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<211> 51  
<212> DNA  
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<210> 12  
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<212> DNA  
<213> Homo sapiens

<400> 12  
gaggcccggg gatcgtatgc ttttgatatc 30

<210> 13  
<211> 42  
<212> DNA  
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<400> 13  
ctctcctgca gggccagtca gagggttagc agctacttag cc 42

<210> 14  
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<212> DNA  
<213> Homo sapiens

<400> 14  
gatgcatcca acagggcc 18

<210> 15  
<211> 21  
<212> DNA  
<213> Homo sapiens

<400> 15  
cagcagcgta gcaactggcc t 21

<210> 16  
<211> 788  
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<213> Homo sapiens

<400> 16

Met Arg Ala Arg Pro Arg Pro Arg Pro Leu Trp Ala Thr Val Leu Ala  
1 5 10 15

Leu Gly Ala Leu Ala Gly Val Gly Val Gly Gly Pro Asn Ile Cys Thr  
20 25 30

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Thr Arg Gly Val Ser Ser Cys Gln Gln Cys Leu Ala Val Ser Pro Met  
35 40 45

Cys Ala Trp Cys Ser Asp Glu Ala Leu Pro Leu Gly Ser Pro Arg Cys  
50 55 60

Asp Leu Lys Glu Asn Leu Leu Lys Asp Asn Cys Ala Pro Glu Ser Ile  
65 70 75 80

Glu Phe Pro Val Ser Glu Ala Arg Val Leu Glu Asp Arg Pro Leu Ser  
85 90 95

Asp Lys Gly Ser Gly Asp Ser Ser Gln Val Thr Gln Val Ser Pro Gln  
100 105 110

Arg Ile Ala Leu Arg Leu Arg Pro Asp Asp Ser Lys Asn Phe Ser Ile  
115 120 125

Gln Val Arg Gln Val Glu Asp Tyr Pro Val Asp Ile Tyr Tyr Leu Met  
130 135 140

Asp Leu Ser Tyr Ser Met Lys Asp Asp Leu Trp Ser Ile Gln Asn Leu  
145 150 155 160

Gly Thr Lys Leu Ala Thr Gln Met Arg Lys Leu Thr Ser Asn Leu Arg  
165 170 175

Ile Gly Phe Gly Ala Phe Val Asp Lys Pro Val Ser Pro Tyr Met Tyr  
180 185 190

Ile Ser Pro Pro Glu Ala Leu Glu Asn Pro Cys Tyr Asp Met Lys Thr  
195 200 205

Thr Cys Leu Pro Met Phe Gly Tyr Lys His Val Leu Thr Leu Thr Asp  
210 215 220

Gln Val Thr Arg Phe Asn Glu Glu Val Lys Lys Gln Ser Val Ser Arg  
225 230 235 240

Asn Arg Asp Ala Pro Glu Gly Gly Phe Asp Ala Ile Met Gln Ala Thr  
245 250 255

Val Cys Asp Glu Lys Ile Gly Trp Arg Asn Asp Ala Ser His Leu Leu  
260 265 270

Val Phe Thr Thr Asp Ala Lys Thr His Ile Ala Leu Asp Gly Arg Leu

275

CEN 249 CIPNPGEN 095.ST25.txt  
280 285Ala Gly Ile Val Gln Pro Asn Asp Gly Gln Cys His Val Gly Ser Asp  
290 295 300Asn His Tyr Ser Ala Ser Thr Thr Met Asp Tyr Pro Ser Leu Gly Leu  
305 310 315 320Met Thr Glu Lys Leu Ser Gln Lys Asn Ile Asn Leu Ile Phe Ala Val  
325 330 335Thr Glu Asn Val Val Asn Leu Tyr Gln Asn Tyr Ser Glu Leu Ile Pro  
340 345 350Gly Thr Thr Val Gly Val Leu Ser Met Asp Ser Ser Asn Val Leu Gln  
355 360 365Leu Ile Val Asp Ala Tyr Gly Lys Ile Arg Ser Lys Val Glu Leu Glu  
370 375 380Val Arg Asp Leu Pro Glu Glu Leu Ser Leu Ser Phe Asn Ala Thr Cys  
385 390 395 400Leu Asn Asn Glu Val Ile Pro Gly Leu Lys Ser Cys Met Gly Leu Lys  
405 410 415Ile Gly Asp Thr Val Ser Phe Ser Ile Glu Ala Lys Val Arg Gly Cys  
420 425 430Pro Gln Glu Lys Glu Lys Ser Phe Thr Ile Lys Pro Val Gly Phe Lys  
435 440 445Asp Ser Leu Ile Val Gln Val Thr Phe Asp Cys Asp Cys Ala Cys Gln  
450 455 460Ala Gln Ala Glu Pro Asn Ser His Arg Cys Asn Asn Gly Asn Gly Thr  
465 470 475 480Phe Glu Cys Gly Val Cys Arg Cys Gly Pro Gly Trp Leu Gly Ser Gln  
485 490 495Cys Glu Cys Ser Glu Glu Asp Tyr Arg Pro Ser Gln Gln Asp Glu Cys  
500 505 510Ser Pro Arg Glu Gly Gln Pro Val Cys Ser Gln Arg Gly Glu Cys Leu  
515 520 525

CEN 249 CIPNPGEN 095.ST25.txt

Cys Gly Gln Cys Val Cys His Ser Ser Asp Phe Gly Lys Ile Thr Gly  
530 535 540

Lys Tyr Cys Glu Cys Asp Asp Phe Ser Cys Val Arg Tyr Lys Gly Glu  
545 550 555 560

Met Cys Ser Gly His Gly Gln Cys Ser Cys Gly Asp Cys Leu Cys Asp  
565 570 575

Ser Asp Trp Thr Gly Tyr Tyr Cys Asn Cys Thr Thr Arg Thr Asp Thr  
580 585 590

Cys Met Ser Ser Asn Gly Leu Leu Cys Ser Gly Arg Gly Lys Cys Glu  
595 600 605

Cys Gly Ser Cys Val Cys Ile Gln Pro Gly Ser Tyr Gly Asp Thr Cys  
610 615 620

Glu Lys Cys Pro Thr Cys Pro Asp Ala Cys Thr Phe Lys Lys Glu Cys  
625 630 635 640

Val Glu Cys Lys Lys Phe Asp Arg Glu Pro Tyr Met Thr Glu Asn Thr  
645 650 655

Cys Asn Arg Tyr Cys Arg Asp Glu Ile Glu Ser Val Lys Glu Leu Lys  
660 665 670

Asp Thr Gly Lys Asp Ala Val Asn Cys Thr Tyr Lys Asn Glu Asp Asp  
675 680 685

Cys Val Val Arg Phe Gln Tyr Tyr Glu Asp Ser Ser Gly Lys Ser Ile  
690 695 700

Leu Tyr Val Val Glu Glu Pro Glu Cys Pro Lys Gly Pro Asp Ile Leu  
705 710 715 720

Val Val Leu Leu Ser Val Met Gly Ala Ile Leu Leu Ile Gly Leu Ala  
725 730 735

Ala Leu Leu Ile Trp Lys Leu Leu Ile Thr Ile His Asp Arg Lys Glu  
740 745 750

Phe Ala Lys Phe Glu Glu Glu Arg Ala Arg Ala Lys Trp Asp Thr Ala  
755 760 765

Asn Asn Pro Leu Tyr Lys Glu Ala Thr Ser Thr Phe Thr Asn Ile Thr  
770 775 780

Tyr Arg Gly Thr  
785

<210> 17  
<211> 799  
<212> PRT  
<213> Homo sapiens  
<400> 17

Met Pro Arg Ala Pro Ala Pro Leu Tyr Ala Cys Leu Leu Gly Leu Cys  
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20 25 30

Ala Thr Ser Cys Glu Glu Cys Leu Leu Ile His Pro Lys Cys Ala Trp  
35 40 45

Cys Ser Lys Glu Asp Phe Gly Ser Pro Arg Ser Ile Thr Ser Arg Cys  
50 55 60

Asp Leu Arg Ala Asn Leu Val Lys Asn Gly Cys Gly Gly Glu Ile Glu  
65 70 75 80

Ser Pro Ala Ser Ser Phe His Val Leu Arg Ser Leu Pro Leu Ser Ser  
85 90 95

Lys Gly Ser Gly Ser Ala Gly Trp Asp Val Ile Gln Met Thr Pro Gln  
100 105 110

Glu Ile Ala Val Asn Leu Arg Pro Gly Asp Lys Thr Thr Phe Gln Leu  
115 120 125

Gln Val Arg Gln Val Glu Asp Tyr Pro Val Asp Leu Tyr Tyr Leu Met  
130 135 140

Asp Leu Ser Leu Ser Met Lys Asp Asp Leu Asp Asn Ile Arg Ser Leu  
145 150 155 160

Gly Thr Lys Leu Ala Glu Glu Met Arg Lys Leu Thr Ser Asn Phe Arg  
165 170 175

Leu Gly Phe Gly Ser Phe Val Asp Lys Asp Ile Ser Pro Phe Ser Tyr  
180 185 190

Thr Ala Pro Arg Tyr Gln Thr Asn Pro Cys Ile Gly Tyr Lys Leu Phe  
195 200 205

CEN 249 CIPNPGEN 095.ST25.txt

Pro Asn Cys Val Pro Ser Phe Gly Phe Arg His Leu Leu Pro Leu Thr  
210 215 220

Asp Arg Val Asp Ser Phe Asn Glu Glu Val Arg Lys Gln Arg Val Ser  
225 230 235 240

Arg Asn Arg Asp Ala Pro Glu Gly Gly Phe Asp Ala Val Leu Gln Ala  
245 250 255

Ala Val Cys Lys Glu Lys Ile Gly Trp Arg Lys Asp Ala Leu His Leu  
260 265 270

Leu Val Phe Thr Thr Asp Asp Val Pro His Ile Ala Leu Asp Gly Lys  
275 280 285

Leu Gly Gly Leu Val Gln Pro His Asp Gly Gln Cys His Leu Asn Glu  
290 295 300

Ala Asn Glu Tyr Thr Ala Ser Asn Gln Met Asp Tyr Pro Ser Leu Ala  
305 310 315 320

Leu Leu Gly Glu Lys Leu Ala Glu Asn Asn Ile Asn Leu Ile Phe Ala  
325 330 335

Val Thr Lys Asn His Tyr Met Leu Tyr Lys Asn Phe Thr Ala Leu Ile  
340 345 350

Pro Gly Thr Thr Val Glu Ile Leu Asp Gly Asp Ser Lys Asn Ile Ile  
355 360 365

Gln Leu Ile Ile Asn Ala Tyr Asn Ser Ile Arg Ser Lys Val Glu Leu  
370 375 380

Ser Val Trp Asp Gln Pro Glu Asp Leu Asn Leu Phe Phe Thr Ala Thr  
385 390 395 400

Cys Gln Asp Gly Val Ser Tyr Pro Gly Gln Arg Lys Cys Glu Gly Leu  
405 410 415

Lys Ile Gly Asp Thr Ala Ser Phe Glu Val Ser Leu Glu Ala Arg Ser  
420 425 430

Cys Pro Ser Arg His Thr Glu His Val Phe Ala Leu Arg Pro Val Gly  
435 440 445

Phe Arg Asp Ser Leu Glu Val Gly Val Thr Tyr Asn Cys Thr Cys Gly  
450 455 460

CEN 249 CIPNPGEN 095.ST25.txt

Cys Ser Val Gly Leu Glu Pro Asn Ser Ala Arg Cys Asn Gly Ser Gly  
 465 470 475 480  
 Thr Tyr Val Cys Gly Leu Cys Glu Cys Ser Pro Gly Tyr Leu Gly Thr  
 485 490 495  
 Arg Cys Glu Cys Gln Asp Gly Glu Asn Gln Ser Val Tyr Gln Asn Leu  
 500 505 510  
 Cys Arg Glu Ala Glu Gly Lys Pro Leu Cys Ser Gly Arg Gly Asp Cys  
 515 520 525  
 Ser Cys Asn Gln Cys Ser Cys Phe Glu Ser Glu Phe Gly Lys Ile Tyr  
 530 535 540  
 Gly Pro Phe Cys Glu Cys Asp Asn Phe Ser Cys Ala Arg Asn Lys Gly  
 545 550 555 560  
 Val Leu Cys Ser Gly His Gly Glu Cys His Cys Gly Glu Cys Lys Cys  
 565 570 575  
 His Ala Gly Tyr Ile Gly Asp Asn Cys Asn Cys Ser Thr Asp Ile Ser  
 580 585 590  
 Thr Cys Arg Gly Arg Asp Gly Gln Ile Cys Ser Glu Arg Gly His Cys  
 595 600 605  
 Leu Cys Gly Gln Cys Gln Cys Thr Glu Pro Gly Ala Phe Gly Glu Met  
 610 615 620  
 Cys Glu Lys Cys Pro Thr Cys Pro Asp Ala Cys Ser Thr Lys Arg Asp  
 625 630 635 640  
 Cys Val Glu Cys Leu Leu Leu His Ser Gly Lys Pro Asp Asn Gln Thr  
 645 650 655  
 Cys His Ser Leu Cys Arg Asp Glu Val Ile Thr Trp Val Asp Thr Ile  
 660 665 670  
 Val Lys Asp Asp Gln Glu Ala Val Leu Cys Phe Tyr Lys Thr Ala Lys  
 675 680 685  
 Asp Cys Val Met Met Phe Thr Tyr Val Glu Leu Pro Ser Gly Lys Ser  
 690 695 700  
 Asn Leu Thr Val Leu Arg Glu Pro Glu Cys Gly Asn Thr Pro Asn Ala  
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705 CEN 249 CIPNPGEN 095.ST25.txt 710 715 720  
 Met Thr Ile Leu Leu Ala Val Val Gly Ser Ile Leu Leu Val Gly Leu  
 725 730 735  
 Ala Leu Leu Ala Ile Trp Lys Leu Leu Val Thr Ile His Asp Arg Arg  
 740 745 750  
 Glu Phe Ala Lys Phe Gln Ser Glu Arg Ser Arg Ala Arg Tyr Glu Met  
 755 760 765  
 Ala Ser Asn Pro Leu Tyr Arg Lys Pro Ile Ser Thr His Thr Val Asp  
 770 775 780  
 Phe Thr Phe Asn Lys Phe Asn Lys Ser Tyr Asn Gly Thr Val Asp  
 785 790 795